

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO | |
|------------------------------------|---------------------------------|----------------------|---------------------|-----------------|--|
| 10/635,668 | 08/07/2003 | Juergen Hoffmann | 033275-408 | 8893 | |
| 21839 | 7590 11/16/2004 | | EXAM | EXAMINER | |
| BURNS DOANE SWECKER & MATHIS L L P | | | TRIEU, THAI BA | | |
| POST OFFICE ALEXANDRI | E BOX 1404 [A. VA 22313-1404 | | ART UNIT | PAPER NUMBER | |
| | , | | 3748 | | |

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | Λ |
|--|---|--|--------------------|
| | Application No. | Applicant(s) | - <u>C</u> |
| | 10/635,668 | HOFFMANN ET A | ∟. |
| Office Action Summary | Examiner | Art Unit | |
| | Thai-Ba Trieu | 3748 | |
| The MAILING DATE of this communication appeared for Reply | opears on the cover sheet wi | th the correspondence add | dress |
| A SHORTENED STATUTORY PERIOD FOR REP THE MAILING DATE OF THIS COMMUNICATION - Extensions of time may be available under the provisions of 37 CFR 1 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a re - If NO period for reply is specified above, the maximum statutory perior - Faiture to reply within the set or extended period for reply will, by statu Any reply received by the Office later than three months after the mailine earned patent term adjustment. See 37 CFR 1.704(b). | | eply be timely filed y (30) days will be considered timely THS from the mailing date of this co ANDONED (35 U.S.C. § 133). | r. mmunication. |
| Status | | | |
| 1) Responsive to communication(s) filed on 26. | <u>August 2004</u> . | | |
| , | is action is non-final. | | |
| 3) Since this application is in condition for allow | | | merits is |
| closed in accordance with the practice under | Ex parte Quayle, 1935 C.D | . 11, 453 O.G. 213. | |
| Disposition of Claims | | | |
| 4) Claim(s) 1-11 is/are pending in the applicatio | n. | | |
| 4a) Of the above claim(s) is/are withdra | awn from consideration. | | |
| 5) Claim(s) is/are allowed. | | | |
| 6) Claim(s) <u>1-6,10 and 11</u> is/are rejected. | | | |
| 7) Claim(s) 7-9 is/are objected to. | | | |
| 8) Claim(s) are subject to restriction and | or election requirement. | | |
| Application Papers | | | |
| 9) The specification is objected to by the Examir | ner. | | |
| 10) The drawing(s) filed on is/are: a) ac | ccepted or b) objected to | by the Examiner. | |
| Applicant may not request that any objection to th | | | |
| Replacement drawing sheet(s) including the corre | · | • | |
| 11) The oath or declaration is objected to by the E | Examiner. Note the attached | Office Action or form PT | O-152. |
| Priority under 35 U.S.C. § 119 | | | |
| a) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the priority document application from the International Bureau | nts have been received. nts have been received in A ority documents have been | pplication No. <u>09/993,545</u> | |
| * See the attached detailed Office action for a lis | | received. | |
| | | | |
| · | | | |
| Attachment(s) | | (DEC 112) | |
| Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) | | Summary (PTO-413) s)/Mail Date | |
| 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/06 Paper No(s)/Mail Date | T | nformal Patent Application (PTO |)-152) |

Art Unit: 3748

DETAILED ACTION

This office action is in response to the Amendment filed on August 26, 2004.

Applicant's cooperation in correcting the informalities in the Abstract is appreciated.

- 1. Applicant's arguments, see Page 5, filed August 26, 2004, with respect to the rejection(s)of claim(s) 1-2 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-3 and 5 of U.S. Patent No. 6,644,012. Since Applicants submitted a terminal disclaimer. Accordingly, the double patenting rejection has been withdrawn.
- 2. Applicant's arguments, see Pages 5-7, filed August 26, 2004, with respect to the rejection(s)of claim(s) 1-2 and 4-6 under 35 U.S.C. § 103(a) as being unpatentable over GB 2 236 145 Hines, in view of U.S. Patent No. 5,329,758 to Urbach et al., and claims 10-11 under 35 U.S.C. § 103(a) as being unpatentable over Hines, in view of Urbach et al., and further in view of Design Choice have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is set forth below. Additionally, the indicated allowable claims 3 and 7-9 have been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Art Unit: 3748

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uji (Patent Number 5,417,053); in view of Urbach et al. (Patent Number 5,329,758).

Uji discloses a gas turbine set, with a cooling air system through which at least one cooling air mass flow (20, 21, 23) flows from a compressor (1) to thermally highly loaded components of the gas turbine set, wherein means (10, 36) for increasing the pressure of flowing cooling air are arranged in a cooling air duct of the cooling air system (See Figures 1-2 and 4);

wherein the means for increasing the pressure are ejectors (36) operating with a working fluid (See Figure 4);

wherein the working fluid is a steam mass flow (Coming from 22 to 10) (See Figure 4);

wherein the working fluid flow is an air mass flow branched off from the compressor (1) at a point of higher pressure (at a point where the line 21 is branched off from line 23) (See Figures 1-2)

wherein means (14) for adjusting the working medium mass flow are arranged in a supply duct for the working medium (See Figures 1-2); and

the gas turbine set being a gas turbine set with sequential combustion (See Figures 1-2).

However, Uji fails to disclose the percentage of the working fluid flow being less than 20% of a driven cooling air mass flow.

Art Unit: 3748

Urbach teaches that it is conventional in the steam augmented Gas turbine art, to utilize the working fluid mass flow being less than 20% of a driven cooling air mass flow (See Column 3, lines 21-28).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the percentage of the working fluid flow being less than 20% of a driven cooling air mass flow, as taught by Urbach, to improve the efficiency of the Uji device.

Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uji (Patent Number 5,417,053); in view of Urbach et al. (Patent Number 5,329,758), an further in view of Design choice.

The modified Uji device discloses the invention as recited above; however, fails to disclose the air mass flow of the working fluid being less than 10% and 5% of the driven mass flow.

One having an ordinary skill in the gas turbine engine art, would have found the air mass flow of the working fluid being less than 10% and 5% of the driven mass flow, as a matter of design choice depending on the gas turbine engine requirements. Moreover, there is nothing in the record, which establishes that the claimed the range of the air mass flow of the working fluid being less than 10% and 5% of the driven mass flow, presents a novel of unexpected result (See In re Kuhle, 526 F. 2d 553, 188 USPQ 7 (CCPA 1975)).

in/Control Number: 10/000,0

Art Unit: 3748

Allowable Subject Matter

Claims **7-9** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

However, the examiner's new telephone number (751) 272-4867 will become effective after the expected changeover date of November 22, 2004.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 3748

Page 6

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB

November 11, 2004

Thai-Ba Trieu
Patent Examiner

Patent Examiner

Art Unit 3748